

Application No.: 10/823,239

Docket No.: JCLA12729

**REMARKS****Present Status of the Application**

It has been acknowledged with appreciation that the previous rejections of claims 1-7 under 35 U.S.C. Section 112, second paragraph, have been withdrawn. Currently, claims 1-17 remain pending, and this action is made final.

In this outstanding action, claims 1-6, 8-9, and 12-17 stay rejected under 35 U.S.C. Section 102(a) as being assertedly anticipated by Lygas (U.S. Patent No. 6,532,292; "Lygas" hereinafter). Claims 7 and 10-11 stand rejected under 35 U.S.C. Section 103(a) as being assertedly unpatentable over Lygas and further in view of Li (U.S. Publication No. 2004/0124739; "Li" hereinafter).

Applicant has amended the independent claims 1, 8, and 14 to patently define the present invention over the prior art references. The proposed amendments are made in light of the original disclosure, and therefore no new matter is introduced by way of these amendments. After entry of the foregoing amendments, Applicant respectfully traverses the rejections addressed to claims 1-17 for at least the following reasons upon which the reconsideration of the instant application is respectfully requested.

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**Discussion of Claim Rejections under 35 U.S.C. Section 102(a)**

*Claims 1-6, 8-9, and 12-17 stay rejected under 35 U.S.C. Section 102(a) as being anticipated by Lygas.*

The currently amended independent claim 1 reads the following:

**"A communicating apparatus, suitable for a telephone system, comprising:**

**a directional speaker, for transmitting a directional carrier wave to at least a user who keeps a distance from the directional speaker;**

**a receiver, for receiving at least an audio signal produced by the user such that the directional carrier wave is not received by the receiver; and**

**a control unit, coupled to the directional speaker and the receiver, for transmitting an electrical audio signal received from a communicating network to the directional speaker, and for transforming the audio signal received from the receiver into an electrical audio signal and transmitting to the communicating network, wherein the control unit operates in a duplex method, and the control unit filters echo signals."**(Emphasis added)

The independent claim 8 also recites a control unit similar to that of independent claim 1.

The Office has asserted Lygas discloses a system that may be used with a phone system comprising directional speaker elements (i.e., the concentric cylindrical element 120 or 130 in FIG. 2 of Lygas) and a receiver. Nonetheless, in column 3, lines 16-23 of Lygas's specification, it recites, "[C]oncentric elements 120 and 130 are provided within an earpiece which is maintained adjacent the listener's ear, and which may be maintained in this position via a headset, or other mechanism, such as a hook for clipping onto the listener's ear or the like. While

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concentric elements 120 and 130 in FIG. 1 are shown so that acoustic fields 125 and 135 are positioned outside the listener's ear canal, this is for illustrative purposes only." The teachings of Lygas as quoted hereinbefore indicate the concentric elements 120 and 130 must be placed in an earpiece or maintained adjacent the listener's ear. By contrast, in the present invention, since the directional carrier wave of the directional speaker is an ultrasonic wave which propagates along a specific direction in the air **within a specific range**, when the ultrasonic wave is being broadcast, it is self-demodulated back to the original audio signal after propagating **for a certain distance** through the air within the specific certain range (see paragraph [0010] of the as-filed specification). In other words, the Lygas reference fails to teach or suggest at least the feature "a directional speaker, for transmitting a directional carrier wave to at least a user who **keeps a distance from the directional speaker**" narrated in the amended claim 1 at issue.

Moreover, in paragraph [0005] of the original disclosure of the instant application, it reads, "[A]nother conventional solution is to communicate with a duplex method, where both the speaker and the receiver work at the same time, yet echo signals are processed at backend to filter out the unexpected feedback noise." In paragraph [0007] of the Applicant's specification, it recites, "[T]he present invention is also directed to a communicating apparatus with low echo, wherein echoic component of a signal is filtered out with a simple circuitry." In paragraph [0036] of the Applicant's specification, it further narrates, "the receiving module of the present invention **is not disposed within digital signal processing circuit for filtering echo.**" Namely, the control unit 101 of the present invention refers to the backend of the receiving module capable of filtering echo. After entry of the amendments to claim 1, the feature "**the control unit**

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operates in a duplex method, and the control unit filters echo signals" has been included, and this feature is neither taught nor suggested by the Lygas reference.

In view of the foregoing, Lygas fails to expressly teach or inherently suggest at least the features "a directional speaker, for transmitting a directional carrier wave to at least a user who keeps a distance from the directional speaker" and "the control unit operates in a duplex method, and the control unit filters echo signals" set forth in the amended claim 1. Accordingly, the grounds of rejection for lack of novelty should be deficient, and claim 1 of the instant application is submitted to be novel and patentable over the Lygas reference.

For at least the foregoing reasons, claims 2-7 should also be patentable as a matter of law in virtue of their direct or indirect dependencies from the allowable claim 1.

Likewise, Applicant respectfully submits Lygas does not teach each and every element in the amended independent claims 8 and 14 encompassing the similar novel features of claim 1 at issue. Accordingly, the amended independent claims 8 and 14 patentably define over Lygas and should be allowed.

As a matter of law, claims 9-13 and 15-17 should also be patentable since they respectively depend on the allowable claims 8 and 14 directly or indirectly.

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**Discussion of Claim Rejection under 35 U.S.C. Section 103(a)**

*Claims 7 and 10-11 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Lygas and further in view of Li.* Applicant respectfully traverses the rejections for at least the reasons set forth below.

Lygas is directed to an apparatus for **transmitting audio into the human ear**, while the present invention is directed to a low echo communicating apparatus comprising a directional speaker for transmitting a directional carrier wave to at least a user who **keeps a distance from the directional speaker**, a receiver, and a control unit that **operates in a duplex method and filters echo signals**. Since both Lygas and Li not only relate to different subject matter from that of the present invention, but also fail to teach the above features presented in bold print, it is respectfully submitted the Office has not provided a sufficient reason or explicit analysis of why the disclosures of the references should be combined. Owing to the non-establishment of the *prima facie* case of obviousness, claims 1 and 8 reciting said novel and non-obvious features in bold print should be rendered non-obvious and patentable over the Lygas reference and the Li reference, either taken alone or in combination.

Claim 7 depending upon the allowable claim 1 and claims 10-11 depending upon the allowable claim 8 contain the patentable features discussed above and further include other features defining the present invention. Therefore, Applicant respectfully submits that an artisan having common sense at the time of the invention would not have reasonably considered embedding the ultrasonic modulating system of Li within the directional speaker taught by Lygas in the manner suggested by the Office.

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Withdrawal of the 103 rejections of claims 7 and 10-11 is accordingly requested.

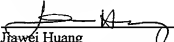
**CONCLUSION**

For at least the foregoing reasons, it is believed that the pending claims 1-17 of the present application patentably define over the prior art and are in proper condition for allowance. If the Office believes that a telephone conference would expedite the examination of the above-identified patent application, the Office is invited to call the undersigned.

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Respectfully submitted,  
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